

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 - 106 Cancelled

107. (Currently amended) A process for inducing direct somatic embryogenesis in ~~Panicoideae~~ and Pooideae and rapidly regenerating fertile ~~monocotyledonous~~ plants, comprising the steps of:

a) culturing isolated immature scutella cells of ~~Panicoideae~~ or Pooideae ~~under conditions conducive to~~ in or on a culture medium comprising auxin, cytokinin and polyamine in amounts effective to cause direct formation of primary embryos without an intervening callus stage, at least until at least one primary embryo reaches the globular developmental stage, the auxin being present in greater proportion than the cytokinin;

and one of the following steps selected from:

b) culturing one or more of the primary embryos from step (a) under conditions conducive to regeneration of plantlets from the primary embryos, and culturing the primary embryo in or on a regeneration medium; or

c) culturing one or more of the primary embryos ~~of Pooideae~~ at the globular developmental stage and no longer than the coleoptilar stage from step (a) ~~under conditions conducive to~~ in or on a culture medium comprising auxin, cytokinin, and polyamine in amounts effective to cause induction of secondary embryo formation, at least until secondary embryogenesis is detected, the cytokinin being present in greater proportion than the auxin, and culturing one or more of the secondary embryos under conditions conducive to regeneration of plantlets from the secondary embryos; ~~or~~

d) ~~culturing one or more of the primary embryos of Panicoideae at the globular developmental stage and no longer than the coleoptilar stage from step (a) under conditions conducive to induction of organogenesis, at least until adventitious shoots are detected, and culturing the adventitious shoots under conditions conducive to regeneration of plantlets.~~